



**U. S.
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**Special
Studies
In
Travel
Economics
And
Marketing**

**Impact of
Foreign
Visitors
on State
Economies,
1983**

**IMPACT OF FOREIGN VISITORS
ON STATE ECONOMIES,
1983**

**A Study Prepared for the
U.S. Travel and Tourism Administration
by the
U.S. Travel Data Center
April 1985**

Price: Thirty Dollars

The United States Travel Data Center is the national, non-profit center for travel and tourism research. Since its establishment in 1973, the Data Center has devoted itself to advancing the common interest of the travel industry and the public it serves by encouraging, sponsoring and conducting statistical, economic and scientific research concerning travel, the travel industry and travel-related industries. In pursuit of this objective, the Data Center gathers, analyzes, publishes and disseminates the results of the such research, and cooperates with all government agencies, private industry and academic institutions with similar purposes and objectives. The Data Center is financed through publication sales, membership dues and contract research. It is located in Suite 610, 1899 L Street, N.W., Washington, D.C. 20036.

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EXECUTIVE SUMMARY

- 21.7 million foreign visitors spent \$13.8 billion in the United States during 1983.
- these visitors spent more on lodging than any other of six expenditure categories.
- nearly one-third of all foreign visitor spending for the year occurred in the Pacific region defined by the Census Bureau.
- foreign visitors spent more than \$2.6 billion in each of Florida and California, far more than in any other state.
- foreign visitor spending in the top five states accounted for two-thirds of all such spending in the U.S. in 1983.
- these expenditures directly generated \$3.1 billion in payroll income for 313 thousand jobs during the year.
- foreign visitor spending also generated \$1.6 billion in federal, state and local tax revenue, with more than one-half of this going to the federal government.
- on the average, every dollar of foreign visitor spending in 1983 directly generated 23 cents in payroll income and 12.6 cents in federal, state and local tax revenue.

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PREFACE

This study was conducted by the U. S. Travel Data Center for the U.S. Travel and Tourism Administration (USTTA), U. S. Department of Commerce, pursuant to purchase order number TS83SAA00117.

This study provides the first objective estimates of foreign travel spending in individual states based upon large-scale surveys of foreign visitors.

The data presented in this report on foreign visitor expenditures in the United States vary from official estimates published by the Bureau of Economic Analysis (BEA), U.S. Department of Commerce, due to the use herein of the USTTA inflight survey based upon which the estimates of spending by overseas visitors and Mexican land visitors are founded. It is likely the BEA will begin using the USTTA survey data to estimate foreign visitor spending for 1985.

Special thanks are due the International Travel Section of Statistics Canada for providing an essential portion of the base data used in this study.

U. S. Travel Data Center
Washington, DC
April, 1985

INTRODUCTION

In 1983, 21.7 million foreign residents traveled to the U.S. and spent \$13.8 billion while in the United States and its territories.

This report presents estimates of foreign visitor spending by state, by region, by purpose of visit, and by individual expenditure categories. Estimates are also provided of the wage and salary (payroll) income, employment, and federal, state and local tax revenue directly generated by this spending. These are detailed for a number of individual states, by expenditure category.

The expenditure estimates presented here were derived from three separate sources covering calendar year 1983. The major source was the U.S. Travel and Tourism Administration's (USTTA's) Survey of International Air Travelers (see Appendix A for more detail). Administered to samples of non-U.S. citizens on board flights departing the U.S. for foreign destinations except Canada, this method gathered expenditure data representing 8.3 million air visitors from Mexico and overseas countries. Appendix B provides information on the methodology of this survey.

Data on the number and expenditures by state visited of the 12.0 million Canadian visitors spending one or more nights in the U.S. during 1983 was provided by Statistics Canada, the agency of the Canadian government responsible for data collection.

Estimates of the number and expenditures of Mexican citizens visiting the U.S. border areas by land were provided by the Office of Economic Analysis, U.S. Department of Commerce. These visitors are estimated to have totaled 1.4 million in 1983.

The expenditures by foreign residents traveling in this country were estimated by state and by major expenditure category based upon these three sources. The expenditure estimates were then passed through the Data Center's Travel Economic Impact Model to produce estimates of the payroll income, employment and tax revenue directly generated by these expenditures.

This model was originally developed for the U.S. Department of the Interior and has been used annually since 1977 to develop estimates of domestic travel spending and its impact on payroll income, employment and tax revenue by state. Further detail on the model is provided in Appendix C.

This report first presents estimates of foreign visitor spending in the U.S. during 1983 tabulated by trip purpose, region visited, visitor country of residence, and major expenditure category. Estimates of total foreign visitor spending are

also provided for all states. Additional in-flight survey detail on expenditure categories for those states meeting minimum standards of statistical reliability are provided in Appendix D.

Estimates of the direct economic impact of these expenditures are also provided for each state. These include the employment, payroll income, and federal, state and local tax revenue generated by foreign visitor spending in each state.

FOREIGN VISITOR EXPENDITURES IN THE UNITED STATES

Trips by foreign residents to the U.S. during 1983 totaled 21.7 million. These include Canadians spending one or more nights in the U.S., all Mexican visitors by air and Mexican land visitors spending more than one day, and all trips by overseas citizens (*i.e.*, foreign except Canada and Mexico) to the U.S.

In tabulating the international air traveler survey data, a number of visits were found that included stays of 90 days or more. In order to more accurately reflect visitor spending, it was decided to exclude from this study expenditures by those travelers unless they were students. All visits of more than 365 days were also excluded regardless of whether they were by students or not.

These visits not meeting the length of stay criteria are estimated at nearly 400 thousand and the associated expenditures at \$343 million or about 2.5 percent of total estimated visitor expenditures. This total is included in the following tables in "unallocated."

Foreign Visitor Expenditures by Expenditure Category

Table 1 shows all foreign visitor expenditures by country or area of visitor residence broken down for major expenditure categories. Overall, foreign residents spent \$13.8 billion while traveling in this country. Table 2 shows the percentage distribution of these expenditures by expenditure category.

Table 2: Distribution of All Foreign Visitor
Expenditures in the U.S. by Category, 1983

Expenditure category	Expenditures (\$ millions)	Percent distribution
Public transportation	\$ 1,340	9.7%
Auto transportation	730	5.3
Lodging	3,814	27.7
Food	2,632	19.1
Entertainment	1,537	11.1
Incidentals	3,718	27.0
Total	\$13,772	100.0%

Note: Details may not add to totals due to rounding.
Source: U.S. Travel Data Center

Table 1: All Foreign Visitor Expenditures by Visitor Residence, by Category, 1983
(\$ Millions).

Visitor Residence	Public Trans.	Auto Trans.	Lodging	Food	Enter- tainment	Inci- dentals	Total
Canada	\$125.7	\$377.1	\$578.2	\$754.1	\$301.7	\$377.1	\$2,513.9
Mexico	24.2	112.3	224.3	332.5	136.8	944.8	1,776.0
Mexico-land	0.0	102.0	131.1	276.8	102.0	845.1	1,457.0
Mexico-air	24.2	10.3	93.2	55.7	34.8	99.7	319.0
United Kingdom	114.7	22.1	291.0	142.8	115.3	96.0	781.9
West Germany	101.0	27.9	239.8	130.5	59.7	82.5	641.5
France	45.2	15.7	127.7	77.6	24.8	59.4	350.4
Italy	31.9	3.9	76.7	44.5	17.5	40.6	215.1
Other Europe	130.9	26.8	279.6	162.2	93.4	133.0	825.9
Venezuela	29.2	14.0	93.9	61.0	45.7	120.2	364.0
Other S.America	104.7	23.4	327.1	164.7	125.3	329.5	1,074.7
Central America	33.5	13.6	96.0	46.0	47.7	108.3	345.1
Caribbean	40.2	20.4	115.1	73.2	51.1	386.1	686.1
Africa	26.2	4.3	60.0	32.0	20.7	46.1	189.4
Japan	208.3	8.6	636.7	230.9	245.4	346.3	1,676.3
Other Far East	119.3	16.2	212.2	121.1	86.8	222.1	777.6
Australia	52.8	4.3	111.0	61.8	38.2	56.2	324.4
Other Oceania	20.8	3.1	48.1	22.3	18.8	22.6	135.6
Middle East	73.6	11.4	119.5	92.0	49.0	203.8	549.1
Unallocated*	57.7	24.5	177.1	83.0	59.1	143.2	544.8
Total	\$1,340.1	\$729.7	\$3,814.8	\$2,632.3	\$1,537.4	\$3,717.7	\$13,772.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding.

* Includes responses that exceeded length of stay criteria or could not be allocated among states; see text.

Table 3: All Foreign Visitor Expenditures By Visitor Residence, By Census Region Visited 1983,
(\$ Millions)

Visitor Residence	New England	Middle Atlantic	South East	East N. Central	West N. Central	West S. Central	Mountain	Pacific	Terri-tories	Total
Canada	\$251.2	\$314.6	\$812.5	\$142.0	\$88.5	\$62.5	\$258.1	\$584.3	\$0.0	\$2,513.7
Mexico	7.5	51.2	43.3	5.3	1.1	762.7	292.4	604.1	8.4	1,775.9
Mexico-land	0.0	0.0	0.0	0.0	0.0	692.0	274.0	491.0	0.0	1,457.0
Mexico-air	7.5	51.2	43.3	5.3	1.1	70.7	18.4	113.1	8.4	318.9
United Kingdom	36.0	179.3	329.1	18.5	14.7	29.8	29.2	141.4	4.0	781.9
West Germany	23.7	137.8	157.7	49.5	8.3	32.5	47.8	182.9	1.2	641.5
France	14.0	80.8	93.6	23.3	6.7	19.2	23.0	89.3	0.4	350.4
Italy	11.0	76.2	32.5	12.2	4.0	13.6	17.2	48.2	0.2	215.1
Other Europe	40.5	165.4	224.3	50.6	15.3	35.9	60.6	230.3	2.7	825.6
Venezuela	12.6	55.7	204.3	7.2	12.5	37.4	11.2	15.5	7.7	364.0
Other S. America	19.1	219.1	551.4	38.2	8.5	69.8	24.7	139.5	4.3	1,074.7
Central America	2.4	45.8	168.9	13.9	2.6	14.7	8.8	86.5	1.5	345.1
Caribbean	8.6	124.4	488.4	11.2	1.7	10.0	4.5	28.0	9.4	686.1
Africa	6.1	42.9	58.4	16.9	4.6	10.0	10.1	40.2	0.2	189.4
Japan	24.1	152.1	95.1	91.4	12.6	40.2	42.6	1,142.6	75.6	1,676.3
Other Far East	29.3	121.5	70.3	67.6	10.8	56.3	42.9	378.2	0.6	777.6
Australia	10.2	38.2	41.9	13.5	4.9	14.0	26.7	174.6	0.2	324.4
Other Oceania	12.4	14.5	13.9	2.8	1.4	7.9	11.1	71.4	0.1	135.6
Middle East	15.6	100.6	110.9	21.3	22.7	83.0	37.7	156.5	0.9	549.1
Unallocated*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	544.8
Total	\$524.3	\$1,920.3	\$3,496.5	\$585.2	\$221.0	\$1,299.5	\$948.5	\$4,113.7	\$117.2	\$13,772.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding.

* Includes responses that exceeded length of stay criteria or could not be allocated among states; see text.

States comprising the Census regions:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. MIDDLE ATLANTIC: New Jersey, New York, Pennsylvania. SOUTH EAST: Alabama, Delaware, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia. EAST NORTH CENTRAL: Indiana, Illinois, Michigan, Ohio, Wisconsin. WEST NORTH CENTRAL: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. WEST SOUTH CENTRAL: Arkansas, Louisiana, Oklahoma, Texas. MOUNTAIN: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming. PACIFIC: Alaska, California, Hawaii, Oregon, Washington.

Table 4: Foreign Visitor Survey Expenditures by Visitor Residence, by Purpose,
1983 (\$ Millions)*

Visitor Residence	Business/ Convention	Personal	Study	Bus./Con.& Personal	Not Reported	Total
Mexico-air	\$58.8	\$212.7	\$8.9	\$37.1	\$1.6	\$319.0
United Kingdom	214.1	483.5	7.0	73.8	3.5	781.9
West Germany	214.9	344.4	28.7	47.6	5.9	641.5
France	143.5	140.2	32.6	27.6	6.5	350.4
Italy	73.1	110.4	18.8	12.5	0.4	215.1
Other Europe	244.3	388.7	106.4	84.7	1.8	825.9
Venezuela	74.9	227.4	31.0	30.8	0.0	364.0
Other S. America	244.6	619.8	67.3	139.6	3.3	1,074.7
Central America	87.5	216.5	6.9	33.7	0.5	345.1
Caribbean	188.2	291.8	21.4	183.5	1.4	686.1
Africa	51.2	92.3	18.8	26.6	0.5	189.4
Japan	515.0	1,023.2	64.5	71.9	1.6	1,676.3
Other Far East	219.9	401.4	57.2	98.8	0.3	777.6
Australia	78.6	179.5	26.6	39.3	0.3	324.4
Other Oceania	27.6	72.0	20.0	16.1	0.0	135.6
Middle East	114.4	335.1	33.0	66.4	0.2	549.1
Unallocated**	199.4	276.1	17.9	43.5	8.0	544.8
Total	\$2,749.6	\$5,414.9	\$567.2	\$1,033.4	\$35.9	\$9,801.0

Note: Figures may not add to totals due to rounding.

* Does not include Mexico land visitor or Canadian visitor expenditures.

** Includes responses that exceeded length of stay criteria or could not be allocated among states; see text.

Source: U.S. Travel Data Center

Foreign visitors spent more on lodging while in the U.S. than on any other single category. Incidental purchases garnered the second largest share of visitor spending in 1983, nearly as much as lodging.

Public and automobile transportation each showed less than ten percent of the total with public transportation expenditures nearly twice those for auto transportation.

The distribution of expenditures among categories varied according to the nationality of the visitor. For example, Canadians spent more on food than any other single category, while Mexican visitors spent more than half of their total on gifts, souvenirs and other miscellaneous goods and services not classified as food, lodging, entertainment or transportation.

Table 3 shows all foreign visitor expenditures in individual U.S. regions by country or area of residence. The regions shown here are defined by the U.S. Bureau of the Census and are employed extensively in economic data presentations. The same data by the travel regions defined by the Travel Industry Association of America (TIA) are shown in Appendix E.

The USTTA international air traveler survey permitted tabulation of visitor estimates by trip purpose, while the other data sources did not. Table 4 shows these estimates by country or area of visitor residence.

Table 5 summarizes the overall estimates by trip purpose. "Personal" groups together the individual questionnaire categories of "vacation/holiday," "visit friends" and "visit relatives."

Table 5: Distribution of Foreign Visitor Survey Expenditures by Trip Purpose, 1983*

Trip purpose	Expenditures (\$ millions)	Percent distribution
Business/convention	\$2,750	28.1%
Business/convention/ personal	1,033	10.5
Personal	5,415	55.2
Study/formal schooling	567	5.8
Not reported	36	0.4
Total	\$9,801	100.0%

*does not include expenditures by Mexico land visitors or Canadian visitors

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

Expenditures on personal trips were larger than any other category for every country or area listed. However, how much these expenditures dominated the total varied somewhat by nationality of visitor.

For example, about sixty percent of expenditures by visitors from Mexico (air), the United Kingdom, Venezuela, the Middle East were on personal trips. The percentage for Japanese visitors was nearly two-thirds. However, less than one-half of the spending of visitors from the Caribbean or Africa were on these trips.

Foreign Visitor Expenditures by Region Visited

As indicated in Table 6, foreign visitors spent more in the Pacific region than in any other single region: nearly 30 percent of the total. The South East ranks second with over one-quarter. The West North Central region garnered the least of all multi-state regions with less than two percent in 1983.

Table 6: Distribution of All Foreign Visitor Expenditures by U.S. Region Visited, 1983

U.S. Region	Expenditures (\$ millions)	Percent distribution
New England	\$ 524	3.8%
Middle Atlantic	1,920	13.9
South East	3,497	25.4
East N. Central	585	4.2
West N. Central	221	1.6
West S. Central	1,300	9.4
Mountain	949	6.9
Pacific	4,114	29.9
U.S. Territories	117	0.9
Unallocated	545	4.0
Total	\$13,772	100.0%

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

Of course, this regional distribution varies considerably by residence of visitor. For example, Canadians spent nearly one-third of their total in the South East region, while Mexican visitors allocated the largest proportion of their total -- one-quarter -- to the West South Central region. Japanese visitors spent two-thirds of their expenditures in the Pacific region. Table 9 below, provides regional data by the residence area of foreign visitors.

Table 7 shows total foreign visitor expenditures for selected states in 1983.

The sampling variability of the estimates of Canadian and Mexican land visitor expenditures by state could not be estimated from the data at hand. However, the general order of magnitude of the relative sampling variabilities of the inflight survey estimates at the 95 percent confidence level is indicated by asterisks in the table. If a state has no asterisk, the relative sampling variability of the inflight survey estimate for the state is less than ten percent of the total. This means that the we are 95 percent certain that the expenditure estimate drawn from this sample is within ten percent of the estimate shown in Appendix D.

State expenditure estimates with high relative inflight survey sampling variabilities should be viewed with caution. Other samples of the same size might produce a significantly different estimate of expenditures for such a state. See Appendix D for further information.

Florida and California appear as the top states for foreign visitor spending with more than 19 percent of the nation's total each. New York, Hawaii and Texas round out the five states with one billion dollars or more in foreign visitor spending in 1983.

Table 7: Foreign Visitor Expenditures by State Visited, Rank, Percent Share, and Average per Visitor, 1983

State	Expenditures (\$ millions)	Share of U.S. total (percent)	Rank	Average spending per visitor
Alabama	\$ 61.5*	0.5%	25	\$500+
Alaska	24.1**	0.2%	39	\$300-\$499
Arizona	353.2	2.7%	6	\$300-\$499
Arkansas	10.9**	0.1%	45	\$300-\$499
California	2,630.9	20.1%	2	\$500+
Colorado	82.3	0.6%	21	\$100-299
Connecticut	49.7*	0.4%	32	\$100-299
Delaware	5.8**	0	51	\$100-299
Florida	2,652.7	20.2%	1	\$500+
Georgia	124.4	0.9%	16	\$100-299
Hawaii	1,172.5	8.9%	4	\$500+
Idaho	15.3**	0.1%	42	Under \$100
Illinois	231.0	1.8%	10	\$300-\$499
Indiana	40.4*	0.3%	35	\$100-299
Iowa	15.0*	0.1%	43	\$100-299

Table 7: Foreign Visitor Expenditures by State Visited, Rank, Percent Share, and Average per Visitor, 1983 -- Continued

State	Expenditures (\$ millions)	Share of U.S. total (percent)	Rank	Average spending per visitor
Kansas	\$ 10.6*	0.1%	46	\$100-299
Kentucky	26.8*	0.2%	38	\$100-299
Louisiana	142.7	1.1%	15	\$300-\$499
Maine	108.6**	0.8%	18	\$100-299
Maryland	54.1*	0.4%	29	\$100-299
Massachusetts	270.1	2.1%	9	\$100-299
Michigan	154.4	1.2%	13	\$100-299
Minnesota	86.3*	0.7%	20	\$100-299
Mississippi	6.9**	0.1%	49	\$100-299
Missouri	57.1*	0.4%	27	\$500+
Montana	50.2**	0.4%	31	Under \$100
Nebraska	7.9*	0.1%	48	\$100-299
Nevada	309.9	2.4%	7	\$300-\$499
New Hampshire	23.7*	0.2%	40	Under \$100
New Jersey	208.0	1.6%	12	\$300-\$499
New Mexico	77.5*	0.6%	22	\$300-\$499
New York	1,556.0	11.9%	3	\$300-\$499
North Carolina	50.6*	0.4%	30	\$100-299
North Dakota	40.0**	0.3%	36	Under \$100
Ohio	116.3	0.9%	17	\$100-299
Oklahoma	33.8*	0.3%	37	\$500+
Oregon	69.3*	0.5%	23	\$100-299
Pennsylvania	146.3	1.1%	14	\$100-299
Rhode Island	15.6*	0.1%	41	\$100-299
South Carolina	65.4*	0.5%	24	\$100-299
South Dakota	8.5**	0.1%	47	Under \$100
Tennessee	58.5*	0.4%	26	\$100-299
Texas	1,111.6	8.5%	5	\$500+
Utah	43.3*	0.3%	33	\$100-299
Vermont	56.6**	0.4%	28	Under \$100

Table 7: Foreign Visitor Expenditures by State Visited, Rank, Percent Share, and Average per Visitor, 1983 -- Continued

State	Expenditures (\$ millions)	Share of U.S. total (percent)	Rank	Average spending per visitor
Virginia	\$ 93.1*	0.7%	19	\$100-299
Washington	216.7	1.7%	11	\$100-299
West Virginia	5.9**	@	50	Under \$100
Wisconsin	43.1*	0.3%	34	\$100-299
Wyoming	12.8**	0.1%	44	Under \$100
Dist. of Columbia	290.9	2.2%	8	\$300-\$499
Total	\$13,110.0	100.0%		\$384

* relative sampling variability of inflight survey expenditure estimates is greater than +10 percent but less than +25 percent

** relative sampling variability of inflight survey expenditure estimates is + 25 percent or more

* no expenditures indicated in inflight survey

@ less than 0.05 percent

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

Foreign visitor spending in America is highly concentrated. The five states garnering one billion dollars or more accounted for two-thirds of all foreign visitor spending in the U.S. during 1983. No states earned foreign visitor receipts between \$500 million and \$1 billion, and only 12 states and the District of Columbia indicate more than \$100 million but less than \$1 billion.

Five states appear to have received less than \$10 million in foreign visitor spending in 1983, with Delaware and West Virginia showing the least at less than \$6 million each.

Table 7 also shows the general magnitude of average foreign visitor spending for each state visited. These averages reflect travel party size, mode of transportation, accommodations used and length of stay in each state. Precise estimates are not provided here because the relative sampling variabilities of average spending per visitor in each state could not be calculated from the data available but are probably quite high for most states.

The average spending per foreign visitor per state was \$384 in 1983. This is considerably less than the average per foreign visitor since the latter average is not divided among the average number of states visited.

Table 8 presents estimates of foreign visitor expenditures in each of the eight Census regions of the U.S. by expenditure category. A table showing similar estimates by the U.S. travel regions as defined by the Travel Industry Association of America appears in Appendix E.

Visitors indicate different spending patterns according to the regions they visit. For example, public transportation accounted for 13 percent of all expenditures in the East North Central region, but only 5 percent of those in the West South Central region.

Lodging comprised 33 percent of foreign visitor expenditures in the Middle Atlantic, but only half as much in the West North Central area. This probably reflects different length of stay patterns as well as lodging choices. Expenditures in the West South Central region were dominated by incidental purchases: 46 percent of the total.

Table 9 summarizes foreign visitor expenditures in each region by major area of origin. The Census regions are shown here, but a similar table showing TIA travel regions appears in Appendix E.

Table 8: All Foreign Visitor Expenditures by Census Region Visited by Category, 1983
(\$ Millions)

Census Region	Public Trans.	Auto Trans.	Lodging	Food	Enter- tainment	Inci- dentals	Total
New England	\$47.0	\$47.2	\$143.9	\$126.4	\$55.2	\$104.9	\$524.4
Middle Atlantic	215.6	72.0	628.0	379.3	207.1	418.4	1,920.4
South East	329.6	210.9	921.8	671.0	399.1	964.1	3,496.6
East N. Central	77.0	29.2	175.3	116.6	54.1	134.1	585.2
West N. Central	26.9	16.5	60.8	50.2	22.9	43.8	221.1
West S. Central	64.4	73.4	222.3	231.3	106.3	601.9	1,299.6
Mountain	85.7	71.2	219.6	203.8	99.1	269.0	948.5
Pacific	423.7	183.5	1,228.2	754.0	515.4	1,008.9	4,113.7
Other*	62.9	22.3	215.6	99.1	67.2	195.1	662.5
Total	\$1,333.1	\$726.1	\$3,814.0	\$2,631.7	\$1,526.4	\$3,740.1	\$13,772.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding.

* Includes spending in U.S. Territories and unallocated spending.

States comprising the Census regions:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. MIDDLE ATLANTIC: New Jersey, New York, Pennsylvania. SOUTH EAST: Alabama, Delaware, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia. EAST NORTH CENTRAL: Indiana, Illinois, Michigan, Ohio, Wisconsin. WEST NORTH CENTRAL: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. WEST SOUTH CENTRAL: Arkansas, Louisiana, Oklahoma, Texas. MOUNTAIN: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming. PACIFIC: Alaska, California, Hawaii, Oregon, Washington.

Table 9: All Foreign Visitor Expenditures by Census Region Visited by
Visitor Residence, 1983 (\$ Millions)

Census Region	Canada	Mexico	Europe	Far East	Other Overseas	Total
New England	\$251.2	\$7.5	\$125.1	\$53.5	\$87.0	\$524.3
Middle Atlantic	314.6	51.2	639.5	273.6	641.3	1920.3
South East	812.5	43.8	837.2	165.4	1638.1	3496.5
East N. Central	142.0	5.3	154.1	158.9	124.9	585.2
West N. Central	88.5	1.1	49.0	23.5	58.9	221.0
West S. Central	62.5	762.7	131.0	96.5	246.8	1299.5
Mountain	258.1	292.4	177.7	85.5	134.8	948.5
Pacific	584.3	604.1	692.2	1520.8	712.2	4113.7
Other*	0.0	50.5	161.5	211.2	239.3	662.3
Total	\$2,513.7	\$1,818.0	\$2,967.4	\$2,588.9	\$3,883.3	\$13,772.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding.

* Includes spending in U.S. Territories and unallocated expenditures.

States comprising the Census regions:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. MIDDLE ATLANTIC: New Jersey, New York, Pennsylvania. SOUTH EAST: Alabama, Delaware, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia. EAST NORTH CENTRAL: Indiana, Illinois, Michigan, Ohio, Wisconsin. WEST NORTH CENTRAL: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. WEST SOUTH CENTRAL: Arkansas, Louisiana, Oklahoma, Texas. MOUNTAIN: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming. PACIFIC: Alaska, California, Hawaii, Oregon, Washington.

As should be expected, the expenditures regions receive from different areas of the world vary. For example, nearly one-half of all foreign visitor expenditures in New England comes from Canada. The West South Central region garners over half of its foreign visitor expenditures from Mexican residents, while nearly one-half of all foreign visitor expenditures in the South East comes from "other overseas" areas, primarily South America and the Caribbean.

In terms of visitor allocation of expenditures among U.S. regions, Canadians spent one-third of their total in New England. Mexican visitors, however, spent more than 40 percent of their total in the West South Central area. Europeans spread their expenditures fairly evenly among the Middle Atlantic, South East and Pacific regions, spending about one-quarter of their total in each. Finally, Far East visitors to the U.S. allocate nearly sixty percent of their expenditures in the Pacific region.

Table 10 distributes the expenditures estimated for overseas and Mexican air visitors from the international air traveler survey among trip purposes and Census Regions visited. A similar table by TIA travel regions appears in Appendix E.

Trips for business or to attend a convention generated one-half of the foreign visitor expenditures in the East North Central region, but only 20 percent of those in the Mountain region. Personal travel, on the other hand, accounted for the greatest expenditure share in the Pacific area: nearly two-thirds of the region's total. This travel was much less important to the East North Central region, where it comprised about one-third of the total.

Combined business and personal trips showed the greatest proportion of total foreign visitor spending in the South East: 15 percent. Visitors here for study or formal schooling accounted for 12 percent of the New England regional visitor spending, a greater share than any other area.

Business/convention visitor spending was spread fairly evenly over the regions, with one-fourth of the total in the Middle Atlantic, South East and Pacific areas. Personal visitor spending was more concentrated, with more than one-third in the Pacific region alone and over one-quarter in the South East.

Spending on combined business/personal trips was centered in the South East, which garnered over one-third of the total. One quarter of the spending of visitors here for study or formal schooling appeared in each of the South East and the Pacific regions.

In summary, the distribution of foreign visitor spending among U.S. regions visited by items purchased, residence of

Table 10: Foreign Visitor Survey Expenditures by Census Region Visited by Trip Purpose, 1983 (\$ Millions)*

Census Region	Business/ Convention	Personal	Study	Bus./Con. &Personal	Not Reported	Total
New England	\$97.9	\$119.4	\$32.9	\$22.9	\$0.0	\$273.1
Middle Atlantic	645.5	683.9	95.2	176.5	4.5	1,605.7
South East	644.9	1,502.8	140.2	388.3	7.7	2,684.0
East N. Central	221.0	151.8	33.8	36.5	0.2	443.2
West N. Central	47.4	63.1	9.6	12.2	0.1	132.5
West S. Central	150.5	290.8	49.7	53.7	0.3	545.0
Mountain	83.4	257.5	33.1	42.0	0.3	416.4
Pacific	646.9	1,974.2	152.1	250.5	14.6	3,038.4
Other**	204.5	380.2	20.0	49.9	7.7	662.3
Total	\$2,742.0	\$5,423.6	\$566.6	\$1,032.5	\$35.5	\$9,801.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding.

* Excludes Mexico land and Canadian expenditures.

** Includes spending in U.S. Territories and unallcoated expenditures.

States comprising the Census regions:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. MIDDLE ATLANTIC: New Jersey, New York, Pennsylvania. SOUTH EAST: Alabama, Delaware, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia. EAST NORTH CENTRAL: Indiana, Illinois, Michigan, Ohio, Wisconsin. WEST NORTH CENTRAL: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. WEST SOUTH CENTRAL: Arkansas, Louisiana, Oklahoma, Texas. MOUNTAIN: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming. PACIFIC: Alaska, California, Hawaii, Oregon, Washington.

the visitors, and trip purpose varied widely in 1983. This indicates that regional travel choices are heavily affected by nationality, transport mode, type of accommodation, length of stay and other trip characteristics. It is clear that the national distribution of these expenditures is a poor guide to regional patterns.

Ten percent of the states garnered two-thirds of foreign visitor spending in 1983. Except for Nevada, the top five states are on the borders of the nation and serve as major gateways for foreign visitor entry. Relatively few foreign visitor dollars contribute to the economies of our interior regions.

This suggests that while many foreign residents are favorably disposed to visiting major gateway states, few spend much time elsewhere in America. This would appear to be the major marketing challenge for destinations located far from our borders: to convince foreign visitors to the U.S. to visit interior regions and spend more time there.

ECONOMIC IMPACT OF FOREIGN VISITOR EXPENDITURES IN THE U.S.

Foreign visitors traveling in the U.S. during 1983 purchased goods and services from retail and service establishments located in every state in the nation. These establishments in turn employed and paid workers to produce and deliver these goods and services.

The Data Center employed its Travel Economic Impact Model to develop estimates of payroll income, employment and tax revenue generated by visitor expenditures in 1983. These estimates are discussed below.

Payroll Income Generated by Foreign Visitor Expenditures

The \$13.1 billion spent by foreign visitors in identified states generated nearly \$3.1 billion in payroll or wage and salary income for U.S. residents during 1983. On the average, every dollar of foreign visitor expenditure generated about 24 cents in payroll income.

Table 11 shows the distribution of this income by Census Region and by major industry sector. A similar table for the TIA travel regions appears in Appendix E.

Table 11: Payroll Income Generated by Foreign Visitor Expenditures in the U.S., by Census Region, by Industry Sector, 1983 (\$ millions)

Census region	Transportation	Lodging	Food-service	Entertainment	General retail trade	Total
New England	\$ 17.8	\$ 40.4	\$ 31.3	\$ 16.4	\$ 13.3	\$ 119.2
Middle Atlantic	71.5	189.1	99.6	65.4	61.6	487.2
South East	115.3	258.1	166.5	126.3	136.8	803.0
East N. Central	25.7	50.9	28.6	15.9	19.2	140.3
West N. Central	3.4	17.0	12.9	7.0	6.2	52.5
West S. Central	25.7	62.4	58.2	31.6	82.4	260.3
Mountain	30.6	65.0	50.9	30.8	35.7	213.0
Pacific	142.9	340.0	202.0	167.8	137.9	990.6
Total	\$438.9	\$1,022.9	\$650.0	\$461.2	\$493.1	\$3,066.1

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

For states comprising Census regions, see Table 10.

The lodging sector captured about one-third of all visitor-generated payroll income in 1983, while foodservice took about one-fifth. The three remaining sectors split the generated income fairly evenly with about 15 percent each.

The distribution of this income among sectors differed markedly by region. For example, only one-tenth of the total visitor-generated payroll in the West South Central region was in transportation, while nearly one-third was in general retail trade. On the other hand, in the East North Central region 18 percent of payroll was in the transportation sector, while only 14 percent was in general retail trade.

In terms of region shares, the Pacific showed by far more visitor-generated payroll income than any other, with nearly one-third of the total. The South East was second with somewhat more than one-fourth, while the Middle Atlantic showed about one-sixth.

Again, the regional shares of the totals differed by industry sector. For example, the West South Central region showed less than six percent of total visitor-generated payroll in transportation but 17 percent of the general retail trade total.

Table 12 presents estimates of payroll income generated by foreign visitor spending in 1983 for each individual state. The reader is cautioned that the relative sampling error for expenditure estimates varies widely by state and that the information in Appendix D suggest how reliable the expenditure and other impact estimates are for each state.

Table 12: Measures of the Economic Impact of Foreign Visitors in the U.S. by State Visited, 1983

	Expenditures (\$ millions)	Payroll (\$ millions)	Employment (jobs)	Tax revenue (\$ millions)
Alabama	\$ 61.5	\$ 14.3	1,700	\$ 6.6
Alaska	24.1	6.1	400	1.5
Arizona	353.2	69.8	8,800	39.7
Arkansas	10.9	2.6	300	1.0
California	2,630.9	613.9	60,600	339.9
Colorado	82.3	19.5	2,000	12.4
Connecticut	49.7	11.5	1,400	7.9
Delaware	5.8	1.3	200	0.6
Florida	2,652.7	596.3	63,200	281.1
Georgia	124.4	30.3	3,100	13.3

Table 12: Measures of the Economic Impact of Foreign Visitors
in the U.S. by State Visited, 1983 -- Continued

	Expenditures (\$ millions)	Payroll (\$ millions)	Employment (jobs)	Tax revenue (\$ millions)
Hawaii	1,172.5	305.3	28,800	126.5
Idaho	15.3	3.6	500	1.7
Illinois	231.0	57.3	6,200	25.8
Indiana	40.4	9.6	1,300	5.7
Iowa	15.0	3.4	500	1.6
Kansas	\$ 10.6	\$ 2.3	200	\$ 1.0
Kentucky	26.8	5.9	700	3.2
Louisiana	142.7	34.3	3,500	16.5
Maine	108.6	22.4	3,100	11.4
Maryland	54.1	12.2	1,400	7.7
Massachusetts	270.1	63.8	7,200	36.4
Michigan	154.4	36.2	4,300	21.1
Minnesota	86.3	21.2	2,700	13.7
Mississippi	6.9	1.6	200	0.6
Missouri	57.1	13.7	1,500	8.0
Montana	50.2	10.6	1,500	3.5
Nebraska	7.9	1.8	200	0.9
Nevada	309.9	82.0	6,700	36.6
New Hampshire	23.7	5.3	600	1.7
New Jersey	208.0	51.5	4,900	29.2
New Mexico	77.5	14.2	1,700	6.6
New York	1,556.0	399.6	35,300	287.6
North Carolina	50.6	12.0	1,500	5.1
North Dakota	40.0	8.4	1,300	3.7
Ohio	116.3	27.6	3,400	16.1
Oklahoma	33.8	7.1	700	3.6
Oregon	69.3	15.1	1,700	5.6
Pennsylvania	146.3	34.8	4,100	20.0
Rhode Island	15.6	3.8	300	2.1
South Carolina	65.4	13.9	1,700	6.2
South Dakota	8.5	1.7	300	0.7
Tennessee	58.5	13.8	1,500	6.7
Texas	1,111.6	216.3	22,400	118.2
Utah	43.3	10.4	1,300	21.2
Vermont	56.6	12.4	1,800	6.0

Table 12: Measures of the Economic Impact of Foreign Visitors in the U.S. by State Visited, 1983 -- Continued

	Expenditures (\$ millions)	Payroll (\$ millions)	Employment (jobs)	Tax revenue (\$ millions)
Virginia	93.1	21.2	2,400	9.4
Washington	216.7	50.2	5,600	26.4
West Virginia	5.9	1.3	100	0.5
Wisconsin	43.1	9.6	1,400	4.8
Wyoming	12.8	2.9	300	1.2
Dist. of Columbia	290.9	80.2	6,100	55.4
Total	\$13,110.0	\$3,066.1	312,800	\$1,647.4

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

Overall, five states have estimated visitor-generated payroll in excess of \$100 million. Twenty-eight fell between \$10 million and \$100 million, and eighteen fell below \$10 million in visitor-generated payroll. This payroll averaged \$60 million per state.

Employment Generated by Foreign Visitor Expenditures

One of the most important benefits of foreign visitor spending here is the employment it supports. Foreign visitor spending identified by state generated nearly 313 thousand jobs in the U.S. during 1983. On the average, each \$42,000 in visitor spending directly supported one job. These jobs paid an average of \$9,800 in payroll income.

Table 13 shows the estimated number of jobs for each of the Census regions by major industry sector. Appendix E contains a similar table for the TIA travel regions.

About one-third of these jobs were in the lodging industry, including both the hotel/motel sector and campgrounds. Nearly one-third were in the foodservice area of the industry. Entertainment and the general retail trade sector each accounted for about 14 percent, while less than 6 percent appeared for the transportation sector.

These sector shares differ by region. For example, less than 4 percent of the visitor-generated employment in the West South Central region was in transportation, but 28 percent was in general retail trade. This latter sector accounted for less than one-tenth of the visitor-generated jobs in the West North Central region, while over one-third of this region's visitor employment was in the foodservice sector.

Table 13: Employment Generated by Foreign Visitor Expenditures in the U.S. by Census Region, by Industry Sector, 1983 (thousands)

Census region	Transportation	Lodging	Food-service	Entertainment	General retail trade	Total
New England	0.8	5.1	5.2	1.8	1.5	14.4
Middle Atlantic	2.7	16.7	14.0	5.0	6.1	44.5
South East	5.0	28.5	24.5	11.6	14.3	83.6
East N. Central	1.1	6.3	5.1	2.0	2.1	16.6
West N. Central	0.3	2.4	2.5	1.0	0.6	6.7
West S. Central	1.0	6.9	8.2	3.2	7.6	26.9
Mountain	1.4	6.7	8.1	3.0	3.7	22.8
Pacific	5.6	33.0	29.4	15.5	13.6	97.1
Total	17.4	104.3	95.9	42.7	49.1	312.8

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

Looking at the distribution of visitor-generated employment among the regions, the Pacific garnered about one-third of all of these jobs, followed by the South East with one-quarter. At the other end of the spectrum, the West North Central region indicated only 2 percent of these jobs.

The regions indicate different shares of the visitor-generated employment by industry sector. The West South Central region, for example, accounts for more than 15 percent of all visitor-generated general retail trade employment, but shows only six percent of U.S. employment generated in transportation. The Pacific region, on the other hand, shows about 28 percent of the general retail trade jobs and 36 percent of the employment generated by foreign-visitor spending in the entertainment sector.

Table 12 provides the visitor-generated employment estimates for the states. The average state in the nation shows about 6,100 jobs generated by foreign visitor spending during 1983.

Overall, five states indicate more than ten thousand jobs directly attributable to foreign visitor spending. Thirty-one more fall between ten thousand and one thousand, while 15 show fewer than one thousand such jobs in 1983.

Tax Revenue Generated by Foreign Visitor Expenditures

Foreign visitor expenditures and the payroll income they generate give rise to federal, state and local tax revenue in the U.S. In 1983, foreign visitor expenditures generated \$837 million in federal tax revenue, nearly \$600 million in state tax revenue, and over \$200 million for local tax coffers.

Table 14 shows the distribution of this tax revenue by Census region visited and by level of government. A similar table for TIA travel regions appears in Appendix E.

Table 14: Tax Revenue Generated by Foreign Visitor Expenditures in the U.S., by Census Region, by Level of Government, 1983 (\$ millions)

Census region	Federal	State	Local	Total
New England	\$ 32.7	\$ 27.1	\$ 5.7	\$ 65.5
Middle Atlantic	172.6	91.5	73.3	337.4
South East	199.6	162.2	26.0	395.8
East N. Central	45.4	19.8	8.3	73.5
West N. Central	16.1	10.8	2.7	29.6
West S. Central	71.9	46.0	21.4	139.3
Mountain	50.6	43.4	12.4	106.4
Pacific	248.4	198.5	53.0	499.9
Total	\$837.3	\$599.3	\$202.8	\$1,647.4

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

Federal tax revenue, primarily the airline ticket tax and individual income tax payments by U.S. residents earning income from foreign visitor expenditures, accounted for over one-half the tax revenue generated. State government garnered over one-third, and local government revenue is estimated at 12 percent of the total.

These shares differ among the regions, reflecting differing expenditure patterns and tax structures. In the East North Central region, for example, the Federal share rose to 62 percent while the state share was only 27 percent.

In the South East, on the other hand, the State share stood at more than 40 percent while the local was less than seven percent. In the Middle Atlantic, the local share approached one-quarter of the total visitor-generated tax revenue.

Among regions, the Pacific area garnered the largest share of the total tax take of all levels of government: nearly one-third. The South East was second with nearly one-quarter, while the West North Central showed less than two percent of total visitor-generated tax revenue in 1983.

This revenue at the federal level overshadowed the other two visitor-generated tax sources in the East North Central, West North Central and Mountain regions. State tax revenue attributable to foreign visitor spending dominated in the New England, South East and Pacific regions. Visitor-generated local tax revenue outpaced such federal or state revenue in the Middle Atlantic and West South Central regions.

Appendix F contains the breakdown of foreign visitor-generated tax revenue among federal, state and local governments for the 17 states and the District of Columbia with relatively low inflight survey sampling variabilities.

On the average, every dollar spent here by foreign visitors in 1983 generated 12.6 cents in tax revenue: 6.3 cents for the federal government, 4.6 cents for state governments, and 1.5 cents for local governments. The rate of revenue generation varied among the regions. In the Middle Atlantic region, one visitor dollar generated a total of 17.6 cents for all governments, while in the West South Central region, the visitor dollar produced only 10.7 cents.

In summary, visitor expenditures on lodging and incidentals sold by general retail trade establishments dominated foreign visitor spending in the U.S. during 1983. However, expenditures in the latter sector produced relatively little payroll income, but one-third of the visitor-generated payroll occurred in lodging. In the distribution of foreign-visitor generated employment, lodging and food service each accounted for about one-third of the total.

In terms of the Census regions, the Pacific area dominated the distribution of foreign visitor expenditures, and the payroll income, employment and tax revenue generated by them in 1983. In each case, this region garnered about one-third of the total. The South East followed with the second largest share of each magnitude, on the order of one-quarter of the totals.

At the other end of the scale, the West North Central region garnered the smallest share of foreign visitor expenditures in 1983, and the smallest shares of economic impact generated as well.

APPENDICES

APPENDIX A

FOREIGN VISITOR EXPENDITURE ESTIMATION METHODOLOGY

METHODOLOGY FOR ESTIMATING FOREIGN VISITOR EXPENDITURES BY STATE

Three different approaches were employed to estimate the expenditures in each state by visitors from (1) overseas countries and Mexico by air, (2) Canada, and (3) Mexico by land.

Estimation of Overseas and Mexican Air Visitor Expenditures

The first approach used the data gathered by the U.S. Travel and Tourism Administration's (USTTA) 1983 Survey of International Air Travelers. Respondent records were extracted from the overall data base by the Transportation Systems Center in Cambridge, MA, providing the following information for each respondent:

1. serial number
2. cluster number
3. final weight
4. states visited (up to 6)
5. number of nights spent in each state
6. type of lodging used in each state (4 types)
7. travel party size
8. whether or not a package tour was purchased
9. expenditures on package tour
10. expenditures in U.S. by category (six categories)
11. total expenditures in U.S.
12. trip purpose (7 purposes)
13. country of residence
14. means of transportation in U.S. (6 means)

In order to reflect the expenditures of foreign visitors to the U.S. and exclude those of foreign citizens residing in this country, it was decided to define a "foreign visitor" as those student respondents with length of stays less than 365 nights and non-student respondents with length of stays less than 91 nights.

There were also respondents who did not report any expenditures and some who reported expenditures but did not list any states visited. Table A1 below indicates the numbers in each of these categories and the number of respondent records eligible for tabulation of state expenditures.

Table A1: Disposition of Respondent Records in Survey File

Total records in file	32,085
Non-students >90 nights	287
Students >365 nights	52
Other respondents with expenditures = 0	12,070
Other respondents listing no state visited	778
Records available for state expenditure tabulation	18,898

Distribution of Expenditures Among Categories

Respondents provided expenditure information on the following categories:

1. transportation inside U.S.
2. lodging
3. food and beverages
4. gifts, souvenirs and other purchases
5. entertainment and recreation
6. other spending in U.S.
7. inclusive or package tour

Items 4 and 6 were combined to represent spending on incidental retail purchases.

Respondents also indicated which of the following transport modes and types of lodging they used while here:

Transportation

1. airlines in U.S.
2. intercity railroad
3. intercity bus
4. rented auto
5. private auto
6. other

Lodging

1. hotel/motel
2. private home
3. Campsite
4. Other

The following conventions were used to allocate transportation expenditures and lodging expenditures to the appropriate category:

A. Transportation

1. If airline, railroad, bus or "other was indicated, then all transportation expenditures were allocated to the "public transportation" category.
2. If only modes indicated were private auto or rented auto, then all transportation expenditures were allocated to "auto transportation."
3. If no transport mode was indicated, then all transportation expenditures were allocated to "auto transportation."

B. Lodging

1. If hotel/motel lodging was indicated for any state, then all lodging expenditures were allocated to "hotel/motel lodging."
2. If no hotel/motel lodging indicated, or no lodging indicated at all, then all lodging expenditures were allocated to "other lodging."

These procedures yielded expenditure estimates by state for the following categories:

1. public transportation
2. auto transportation
3. hotel/motel lodging
4. other lodging
5. food and beverages
6. entertainment and recreation
7. incidentals

The expenditures for package tours listed in the file were exclusive of international passenger fares. Based upon data provided by several of the USTTA foreign field offices obtained from foreign tour operators, package tour expenditures were allocated among the above expenditure categories as follows:

- 55% to hotel/motel lodging
- 15% to public transportation
- 10% to food and beverages
- 20% to entertainment and recreation

In some cases, the expenditures reported for individual categories did not sum to the total reported. If the sum was less than the total reported, the residual was allocated among expenditure categories based upon the average distribution of expenditures among categories reported by visitors from the same country. If the categories summed to more than the total reported, then the total was ignored.

Expenditure Distribution Among the States

The expenditures by category derived by the above procedures were distributed among states visited on the following bases to simulate where the transactions actually took place:

A. Transportation

1. Public transportation expenditures were distributed equally among the states visited.
2. Auto transportation expenditures were distributed among states visited pro rata according to nights spent in each.

B. Lodging

1. All lodging expenditures were distributed among states visited on a pro rata basis according to nights spent in each.

C. All others

1. Distributed among states visited on a pro rata basis according to nights spent in each.

Adjustment to National Totals

The expenditures reported by each respondent were multiplied by the final weight indicated in the record to expand up to population totals. Expenditures were then summed across all records for each of the following countries or regions:

Mexico	United Kingdom	Japan
Venezuela	Germany	Other Far East
Other South America	France	
Central America	Italy	Australia
Caribbean	Other Europe	Other Oceania
	Africa	
	Middle East	

Estimates of total expenditures by visitors from each of these countries and regions were obtained from USTTA. For each country/region, it was found that the total from the above sum process were less than reported by USTTA. Consequently, "national expansion factors" were computed as the ratio of the USTTA expenditures for a country or region of visitors to the sum derived from the Data Center's procedures. These factors were then applied to each record according to the origin of the visitor indicated.

Estimation of Canadian Visitor Expenditures

Estimates were obtained from Statistics Canada of total Canadian visitor expenditures in each state. These were not broken down by category in each state, so the 1983 national distribution among categories was used in each state. This distribution is as follows:

- 5% to public transportation
- 15% to auto transportation
- 23% to hotel/motel lodging
- 30% to food and beverages
- 12% for entertainment and recreation
- 15% to incidentals

Estimation of Mexican Land Visitor Expenditures

The only data available on the category and state distribution of Mexican visitors by ground transportation is from a 1979 border crossing survey sponsored by USTTA¹. This survey indicated the following allocation of these expenditures among categories:

- 7% to auto transportation
- 9% to hotel/motel lodging
- 19% to food and beverages
- 7% to entertainment and recreation
- 58% to incidentals

The survey also indicated the following distribution of Mexican land visitor expenditures among the border states:

- 15% to Arizona
- 34% to California
- 4% to New Mexico
- 47% to Texas

¹U.S. Travel Service, Mexican Travel Beyond the United States Border Zone, Principal Findings, U.S. Department of Commerce, February, 1981, 65 pp.

APPENDIX B

METHODOLOGY OF THE SURVEY OF INTERNATIONAL AIR TRAVELERS

The following description of the design, methodology and conduct of the U.S. Travel and Tourism Administration's 1983 Survey of International Air Travelers is reproduced from the agency's publication, In-flight Survey, United States Travel and Tourism Administration Survey of International Air Travelers, Overseas and Mexican Visitors to the United States, Survey Period: October-December, 1983.

TECHNICAL INFORMATION

1. Questionnaire Development and Content

This survey was developed in two phases. Phase I (which covered the period of September through December of 1982) was designed to survey non-United States citizens who were on board flights departing U.S. airports at the end of visits to the United States. Phase II, which commenced in January of 1983, was designed to survey United States residents who are traveling abroad as well as non-U.S. residents who are departing from the United States. The Phase II questionnaire is shown in Appendix B.

The Phase II survey questionnaire was designed to meet the information requirements of a number of government sponsors, airlines, and other users of travel statistics. These organizations include:

- The U.S. Travel and Tourism Administration and the Bureau of Economic Analysis of the U.S. Department of Commerce.
- Participating airlines, both U.S. flag and foreign flag carriers.
- The National Park Service of the U.S. Department of the Interior (co-sponsor).
- Private and government organizations (U.S. and foreign) concerned with tourism and its development.
- The U.S. Department of Transportation.

The Phase II questionnaire is divided into three sections. The first section consists of questions to be answered by all travelers. The second part collects information from non-U.S. residents who have traveled to this country, while the third part contains questions to be answered by U.S. residents traveling overseas and to Mexico.

The wide range of information pertaining to U.S. residents traveling abroad which is collected in the questionnaire is briefly summarized below. The questions to be answered by visitors to the United States and by U.S. residents traveling abroad are indicated in the columns below.

	<u>Type of Information</u>	<u>Question No. for:</u>	
		<u>Visitors</u> <u>to U.S.A.</u>	<u>U.S.</u> <u>Residents</u>
A.	<u>The Traveler</u>		
1.	Age and sex of traveler	9	9
2.	Country of citizenship	12a	12a
3.	Country of residence	12b	12b
4.	Occupation	10	10
5.	Household income	11	11
6.	Number of trips to/from U.S.A.	3	3
B.	<u>The International Trip</u>		
1.	Airline, flight number and date of flight departing U.S.A.	1	1
2.	Type of airline ticket	6a	6a
3.	Use of inclusive tour	6b	6b

Type of Information

Question No. for:
 Visitors to U.S.A. U.S. Residents

- | | | |
|---|----|----|
| 4. Trip booking alternatives | 7 | 7 |
| 5. Sources of information for planning trip | 8 | 8 |
| 6. Travel party composition | 4a | 4a |
| 7. Travel party size | 4b | 4b |
| 8. Purpose(s) of trip | 5 | 5 |
| 9. Airport of boarding this flight | 2a | 2a |
| 10. Airport of debarking this flight | 2b | 2b |
| 11. City where traveler passed through U.S. customs | 13 | - |

C. Activities on Trip*

- | | | |
|--|-----|----|
| 1. Number of nights away from home on entire trip | 14a | - |
| 2. Number of nights inside/outside of the U.S.A. | 14b | 18 |
| 3. For each destination visited: | | |
| a. City/attraction/park | 15a | 19 |
| b. State or country | 15a | 19 |
| c. Number of nights stayed | 15a | 19 |
| d. Type of accommodation (i.e. hotel, home, campsite, other) | 15a | 19 |
| 4. U.S. national parks visited | | |
| a. Name of park | 15b | - |
| b. Number of nights or hours spent in park | 15b | - |

Type of Information

Question No. for:
 Visitors to U.S.A. U.S. Residents

- | | | |
|---|----------------------|---|
| 5. How lodging was selected | 7 | 7 |
| 6. Sources of information for planning trip | 8 | 8 |
| 7. Modes of transportation used in U.S.A. | 16 | - |
| 8. Comments on trip | End of questionnaire | |

D. Travel Expenditures*

(In U.S. dollars for travel party)

- | | | |
|--|-----|-----|
| 1. Cost of inclusive tour (if used) | 17a | 20a |
| 2. International air tickets | 17b | 20b |
| 3. Expenditures in U.S.A.: | | |
| a. Transportation | 17c | - |
| b. Lodging | 17c | - |
| c. Food and beverages | 17c | - |
| d. Gifts, souvenirs, etc. | 17c | - |
| e. Entertainment | 17c | - |
| f. Other spending | 17c | - |
| 4. Expenditures in other countries visited | 17d | 20c |

* For U.S. residents traveling to other countries, the information requested is based on traveler plans and projected expenditures, since the traveler is usually just beginning the trip.

2. Geographic Structure of Survey

In the design of the survey, careful consideration was given to developing a geographic structure which would meet the requirements of a variety of users of the data and also be adaptable to airline route sampling methods.

This portion of the report describes the system developed for geographic structuring of the study for overseas regions and countries, Mexico and the United States. The study was not designed to produce individual statistics for every country and territory due to constraints in funding and sample size. In the design of the sample, those countries and other areas of importance to the U.S. international air travel market were identified by the USTTA and the airline routes serving these areas were given specific attention.

Overseas Regions and Countries

The world regional structure used in these statistical series is essentially the same one developed for the U.S. International Air Travel Statistics (USIATS) series produced by the Transportation Systems Center. It is a well-established structure that is widely used in the analysis of international air passenger traffic. Appendix D lists the countries and territories in each region, and illustrates the make-up of the regions in a map. The only difference between the geographic structuring of these statistics and those of the USIATS involves Mexico and Egypt. Mexico is taken out of the Mid-America Region, and treated in a separate series of statistical tables, and the remaining countries become the Central America Region. Egypt is

included in the Middle East Region and not in Africa for 1983 statistics, but Egypt was included in the African Region in the statistics for the fourth quarter of 1982.

Aggregate statistics are provided for each of the world regions, and statistics are provided for every country in the U. S. international travel market, to the extent that response frequencies and sample design permit.

The table below lists the overseas countries and other areas selected as geographic units of analysis for sample planning. The regions for which no countries are shown are targeted for aggregate regional data only.

Overseas Geographic Units of Analysis for Sample Design

Central America Region	Africa Region
Caribbean Region	Middle East Region Egypt Israel
South America Region Venezuela Colombia Brazil Argentina	Far East Region Japan
Europe Region United Kingdom W. Germany France Italy	Oceania Region Australia

Europe Region (cont.)

Netherlands
Scandinavia
Spain
Belgium
Ireland

Mexico

Statistics for the country of Mexico are shown in separate tables. Mexico is subdivided into the metropolitan centers of Acapulco, Mexico City, Guadalajara, and Monterrey with the balance being shown in "Other Mexico."

United States

The statistics for the United States and its territories are produced for U.S. Tourist Regions as shown in the list and map given in Appendix C. Statistics are also developed for states, large metropolitan areas and selected major tourist attractions to the extent that response frequencies for these places permit.

3. Airline Participation

Once the geographic area structure of the program was established, and the countries and territories to be shown individually in the statistics were selected, the airlines and routes to be sampled were readily identified.

The first step in the determination of airlines was an analysis of U.S. international traffic to the regions,

countries and other areas of importance. Flight schedule data and flight level passenger volume origin/destination data from the USIATS provided information for analyzing the composition of the traffic to each geographic area. Factors influencing the selection of an airline for participation in the survey included the airline's market share in the geographic area under consideration, the desirability of having both a U.S. and foreign flag carrier for each area, and the necessity to keep administrative and operational costs to a minimum.

A list of 11 U.S. flag and 42 foreign flag airlines was published in the August 1982 Survey Plan, showing the carriers of special significance for each region and country in the survey. The USTTA and TSC sought to obtain the voluntary participation of as many of these airlines as possible. Meetings, correspondence and personal contact with airline officials resulted in the participation of 7 U.S. flag airlines and 21 foreign flag airlines in the September through December 1982 monthly data collections. Four additional airlines entered the program during the four quarters of 1983. They serve the Far East, Mexico, and Europe and will increase coverage of those world areas. The individual airline reports which participating carriers receive cover not only non-U.S. residents but also U.S. residents traveling overseas and to Mexico.

4. Sample Design

The sample design is a stratified, two-stage sample where scheduled flights are randomly selected from strata defined by airline and foreign destination in the first stage. The selected flights are treated as clusters of travelers. The responding travelers on

each flight constitute the second stage sample. The design variables, reflecting the objectives of the survey, have a great influence on the sample design. In this survey, the design variables are the numbers of travelers to and from the United States by country of residence, area visited, and scheduled international air carrier. The design was also influenced by a number of other factors and constraints including the desired accuracy and detail of the resulting estimates, the airlines' willingness to participate in the survey, the availability of the sample frame, and the costs of the survey. The effects of these factors on the development of the sample design are discussed below.

To produce an efficient design yielding accurate estimators of the design variables, some prior knowledge of the characteristics of the design variables is necessary. In this case information is needed on the flight-to-flight variation in the proportions of air passengers who are residents of specific countries and are traveling on specific airlines to specific areas of the United States and the world. Since, however, there is no current available source for this information, the design is based on the following assumptions:

- a. In flights between the United States and Country X, the great majority of the non-U.S. citizens on the flights are residents of Country X.
- b. Flights by an airline between the same ports have similar passenger characteristics.

Stratification is used to insure that all participating airlines and residents of countries of interest appear in the sample. It is most beneficial when it yields

homogeneous strata consisting of flights similar to each other with regard to the design variables. The combinations of airline and foreign destination form natural strata consisting of "like" flights with respect to the residence of passengers. In the case of foreign flag carriers, stratification by airline alone is sufficient in most cases, since they tend to serve mainly residents of their native countries and U.S. residents on flights to the United States. U.S. carriers, serving several markets of interest, are broken out by carrier and foreign destination.

The naturally-occurring clusters are the flights which vary in number of passengers from flight to flight. Flights are selected within each stratum by simple random sampling through the use of a random number generator. Although it is efficient in cluster sampling to select a small proportion of elements (passengers) from a large number of clusters (flights containing passengers), the number of clusters to be sampled is constrained to control survey costs and efforts of the airlines. In addition, a random sample of passengers on a flight would be difficult for the flight crews to implement. Consequently, the second-stage sample includes all passengers on a given flight who respond to the survey.

The sample frame (list from which the sample is drawn) is the monthly Official Airline Guide (OAG) list of scheduled flights departing the United States of the airlines participating in the survey. Although quarterly estimates are desired from the survey, sampling is performed monthly to distribute the sample over each quarter. However, the flights to be sampled are limited to those occurring during the week beginning with the third Monday of the month.

This simplifies the operating procedures for the airlines and facilitates the processing of the survey materials.

Survey cost is the main factor in the determination of sample size. The sample sizes are determined to yield a sample large enough to produce reliable estimates at the desired level of geographic detail. At the same time, the case loads for individual airlines are kept to a minimum and the overall survey costs are kept within budget.

The number of flights to be sampled from each stratum was determined on a per stratum basis with consideration to the number of flights, number of passengers carried, foreign destinations, and airline cooperation.

5. Survey Operations

In practice, several departures from the original sample design are necessary. Substitution for sampled flights is permitted in some circumstances. Since sampling must be performed about six weeks prior to the survey week each month, the flight schedule for the month prior to the survey month must be used. While airline schedules are substantially the same from one month to the next, changes occur, especially between the seasons. In cases where a discontinued flight is selected for an airline's monthly sample, the substitution of a flight with a similar route is permitted. In addition, it is acceptable for an airline to change the day of the flight to be surveyed if circumstances prevent the survey's execution on the sampled day.

For various reasons, some airlines occasionally did not participate for the entire quarter, so their samples were not distributed over all months of the quarter. In some cases, strata were eliminated from the sample because of difficulties by the airline in conducting the survey on the desired routes.

The level of response to a survey is critical to the reliability of its results. This quarter, the two types of response in this survey, flight response (the survey actually taking place on a selected flight) and passenger response (a passenger actually completing a questionnaire) increased significantly over the previous survey period.

Of the 494 flight packages mailed to the participating airlines, 257 were returned completed, yielding a flight response rate of 52%. Reasons for the airlines' failure to conduct the survey are cited in the introduction of the report. Also, in some cases, survey flight packages did not get returned, even though flights had been surveyed, because of airline survey coordination problems. Flight response is critical, because without it even the possibility of passenger response is eliminated.

The flight response rate varied considerably among different airlines. Some airlines had a consistently high rate, conducting the survey on a high percentage of their flight sample. Reports on these airlines and their markets will be of better quality than others. To improve the response rates of other airlines and to make it more convenient for all airlines to conduct the survey, the Field Coordinator worked closely with airline management to develop reliable, efficient procedures that accommodate airline operations. For

flights on which surveys were conducted, the average passenger response rate of non-U.S. residents completing the questionnaires was estimated to be about 40.0% and the rate for U.S. residents traveling abroad was estimated to be about 30.4%. This rate varied among airlines. It appears that when the questionnaires were distributed to all the passengers on a flight in a timely manner, the response rate for that flight was high. Again airline cooperation is the key factor in assuring a high passenger response rate. It is very important that a greater number of questionnaires be completed in future quarters. There is reason to believe that response will improve in 1984, as all concerned develop operational experience with the survey.

6. Estimation and Reliability of Results

The survey responses are the primary data source for computing estimates. Information developed by the TSC in its International Air Travel Statistics series from the Immigration and Naturalization Service (INS) Form I-92 flight reports is also used. These reports are collected for each flight arriving at or departing the United States, giving the numbers of U.S. citizens and non-U.S. citizens on the flight. These sources provide the input to the weighted ratio estimation procedures which expand the sample information to represent all visitors to the United States. The use of both the survey responses and an independent, complete data source in the estimation process yields more reliable estimates than if only the survey responses and sampling rates were used.

The survey responses provide information on distributions of variables and relationships among

survey items as well as information relating the country of debarkation to the residence of the passenger. The I-92 data provide total passenger volumes by port of debarkation and the number of U.S. and non-U.S. citizens.

A weight is calculated for each survey respondent. It is defined as the number of passengers traveling to and from the United States via scheduled international air carriers that is represented by the respondent, and its calculation is a four-step process.

- a. The initial weight of a respondent is one, unless children are part of his travel party. In this case, the initial weight has a value greater than one depending on the number of children and the size of the travel party.
- b. Although 100% sampling is performed on a flight, there is usually non-response. The respondents are considered a random sample of the passengers, and each weight is increased to cover the non-response on the flight.
- c. Each weight of a respondent in a stratum is increased to represent all travelers on all flights in the stratum.
- d. The I-92 data are incorporated into the weights by residence by port of debarkation to represent not only the participating, but the non-participating airlines in the survey.

The weights are then used in standard weighted ratio estimation formulas for calculating the distributions, means and medians found in the published tables.

It is known that the I-92 results understate the number of non-U.S. citizens due to reporting problems inherent in the system. In the future, it may be possible to acquire more accurate flight data from the INS Form I-94 also collected on each international U.S. flight. These data, which give counts of the numbers of non-U.S. citizens traveling by flight and country of residence, would make possible further improvements to the estimation methods.

Due to the multi-stage nature of the sample design and the resulting computational burden, sampling variability has not been calculated for the estimates. Instead, the reliability of a set of related estimates is indicated by the number of respondents to the relevant questionnaire items. The more respondents, the more reliable the estimate. The reader must use his own judgement in deciding on the degree of confidence to place in an estimate, and in its proper use. Likewise, non-sampling (response and processing) errors have not been estimated but are likely to be significant, especially when combined with sampling variability. Response errors may be of particular significance due to inaccuracies arising from language translations and currency conversions.

A low number of respondents for a quarterly estimate can cause severe distortion because of the large influence any one respondent exerts on the overall value of the estimate. However, estimates may be more reliable on a year-to-date basis because of the increased number of respondents.

The Guide to Users Section of the INTRODUCTION to this report gives specific information on the accuracy of the results, and the limitations of the estimates for the statistics published in this quarterly report.

APPENDIX C

TRAVEL ECONOMIC IMPACT MODEL

TRAVEL ECONOMIC IMPACT MODEL

Introduction

The Travel Economic Impact Model (TEIM) was originally developed by the U.S. Travel Data Center in 1975 under contract to the U.S. Department of the Interior. It is designed to provide annual estimates of the impact of the travel activity of U.S. residents on national, state and county economies in this country. It is a disaggregated model built upon estimates of 16 travel expenditure categories and their impact on 15 types of travel-related businesses at the retail level in terms of business receipts, employment, wage and salary (payroll) income, and tax receipts that result.

The TEIM has the capability of estimating the economic impact of various types of travel such as business and vacation, by transport mode and type of accommodations used, and other trip and traveler characteristics. While the benchmark model estimates are primarily based on data gathered by the U.S. Bureau of the Census in 1977, it has been updated to provide estimates for succeeding years. Moreover, the model was substantially revised in 1978 to incorporate the auto rental sector and was expanded to represent trips to places 100 miles or more away from home, and all overnight trips away from home regardless of distance.

The TEIM has been used to develop estimates of 1977 and subsequent year travel expenditures and the effect of these expenditures on employment, payroll and tax revenue in each of the 50 states and the District of Columbia. The County Impact Component of the TEIM provides estimates of the economic impact of travel and the county and city level, and has been used in more than 70 studies to estimate travel impact in over one-half of the counties in the nation.

The Model is operated by the Data Center through Micro Pro Corporation Data Star and Report Star computer programs on a QDP 300 computer.

Definition of Terms

A "visitor expenditure" is assumed to take place whenever a visitor exchanges money or the promise of money such as a credit card for a good or service while in the U.S. While the USTTA Survey of International Air Travelers gathered information on expenditures in seven categories:

- Transportation inside the U.S.
- Lodging
- Food and beverages
- Gifts, souvenirs, and other purchases
- Entertainment and recreation
- Other spending in the U.S.A.
- Inclusive or package tour

Through respondent designation of his major mode of transport while in the U.S., transportation spending was further broken down into the two mutually exclusive and inclusive categories of "auto transportation," including rental car expenses and spending when no transport mode was identified, and "public transportation."

It should be noted that visitor spending for international transportation and any expenditures in other countries were excluded from this study.

The "visitor industry," as used herein is the collection of 10 types of retail businesses that provide goods and services to the visitor traveler. These were designated as follows:

- Gasoline service stations
- Common carrier transportation
- Hotels, motels and motor hotels
- Campgrounds and trailer parks
- Eating and drinking places
- Amusement and recreation services
- General merchandise and miscellaneous retail stores

The package tour expenditures were broken down into their component industry categories to fit in with list above.

Estimates of Canadian visitor spending in the U.S. and Mexican visitors by land were obtained for the same seven industry categories as well.

"Economic impact" is represented by measures of spending, employment, payroll, business receipts and tax revenues generated by traveler spending. "Payroll" includes all forms of compensation, such as salaries, wages, commissions, bonuses, vacation

allowances, sick leave pay and the value of payments in kind paid during the year to all employees. Payroll is reported before deductions for social security, income tax insurance, union dues, etc. This definition follows that used by the U.S. Census Bureau in the 1982 Census of Service Industries.¹

"Employment" represents the number of jobs generated by traveler spending, both full and part-time. As such, it is consistent with the U.S. Department of Labor series on nonagricultural payroll employment.²

Description of the Model³

Foreign visitor expenditures were estimated for each of the seven industry sectors listed above in each state (see Appendix A for detail on this process). The TEIM then estimated travel-generated business receipts, employment, and payroll for each sector in each state. Basically, each category of visitor expenditure in a state less the sales and excise taxes applicable to that category equals business receipts for the related business type as defined by the U.S. Census Bureau.

It is assumed that each job in a specific type of business in a state is supported by some amount of business receipts and that each dollar of wages and salaries is similarly supported by some dollar volume of business receipts. The ratios of employment to business receipts are computed for each industry in each state.

These ratios are then multiplied by the total amount of business receipts generated by traveler spending in a particular type of business in the state to obtain the measures of travel-generated employment and payroll of each type of business in each state. For example, the ratio of employees to business receipts in Georgia hotel/motel establishments is multiplied by visitor-generated business receipts of these establishments to obtain

¹U.S. Bureau of the Census, Census of Service Industries, 1982, Area Series, United States, U.S. Government Printing Office, Washington, D.C., 1984-85.

²U.S. Department of Labor, Bureau of Labor Statistics Handbook of Methods, Volume 1, U.S. Government Printing Office, Washington, D.C., 1982, p.14.

³For a detailed description of the TEIM, including equations and data sources, see Frechtling, Douglas C., et. al., Travel Economic Impact Model, Volume I: Final Economic Analysis Methodology, U.S. Travel Data Center, Washington, D.C., 1975, 108 pp.

visitor-generated employment in commercial lodging in the state. A similar process is used for the payroll estimates.

The Fiscal Impact component of the TEIM is used to estimate traveler-generated tax revenues of federal, state and local governments. The yield of each type of tax is related to the best measure of the relevant tax base available for each state consistent with the output of the Economic Impact Component. The ratios of yield to base for each type of tax applicable in the area is then applied to the appropriate primary level output to obtain estimates of tax receipts generated by visitors.

Limitations of the TRIM

These travel expenditures and impact estimates are based on sample surveys of travel activity. Consequently, they are subject to all of the sampling and non-sampling errors inherent in sample surveys.

The method of allocating the visitor expenditure survey estimates among categories, industry sectors and states may distort actual expenditure behavior and resulting impact for individual states and sectors. However, given the difficulty respondents have in recalling the details of their expenditures, it is difficult to construct a better survey and estimation approach given the funds available.

Most travel expenditure data collected is on a "type of purchase" rather than "point of purchase" basis. This means there is some incongruity in matching spending on different goods and services while traveling with the receipts, employment and payroll of different types of businesses.

For example, all spending for meals is assumed to take place in eating and drinking places whereas some may actually occur in hotels or other commercial lodging places. Consequently, visitor-generated employment and payroll in eating and drinking places may be somewhat overestimated but is offset by an underestimation of visitor-generated employment and payroll estimates for hotels and motels.

This inconsistency does not appear to introduce major errors in the calculations and can only be corrected upon collection of point-of-purchase expenditure data.

APPENDIX D

IN-FLIGHT SURVEY EXPENDITURE DETAIL FOR SELECTED STATES

IN-FLIGHT SURVEY EXPENDITURE DETAIL FOR SELECTED STATES

Table D2 below provides estimates for selected states of the expenditures of foreign visitors from overseas countries (*i.e.*, all other countries except Canada and Mexico) and those of visitors from Mexico arriving by air. These are derived through the USTTA Survey of International Air Travelers.

Since these estimates are derived from a probability sample, they have a distribution for which sampling variability can be estimated. The expenditures listed are estimates of the mean of all such samples of similar size. Through statistical theory, we can establish the variance of these means and thus how confident we can be that the expenditure estimates derived from this sample approach the actual mean if the entire foreign visitor population could have been surveyed.

Customary estimates of the mean of a sample distribution break down when the distribution is heavily skewed in one direction. In this case, this skewness is evident by a relatively small number of respondents indicating they spent a great deal while in the U.S. A statistical technique suitable for skewed distributions of this type begins with computation of a non-parametric estimate of the standard deviation (S.D.) around the mean of the distribution based upon the following formula:

$$S.D. = 1/4 * [y(1/16) + 3/4 * y(1/4) - 3/4 * y(3/4) - y(15/16)],$$

where $y(n/m)$ is the expenditure value exceeded by n/m of the respondents. (For the derivation of this formula, see Quenouille, Rapid Statistical Calculations, Hafner Publishing Company, New York, 1959.)

These estimates of the regional standard deviations were calculated for each of the Census regions. Then for each region the estimated standard deviation was divided by the estimated mean of spending per visitor in the region computed by the following equation:

$$\text{mean} = 1/6 [y(1/16) + y(1/4) + 2y(1/2) + y(3/4) + y(15/16)],$$

where $y(n/m)$ is the expenditure value exceeded by n/m of respondents.

The resulting regional factors were then used to calculate the standard deviation for each state in each region. This was done by first dividing the total amount reported spent in the state by the number of respondents reported visiting the state to

obtain a sample estimate of mean expenditures per visitor. This mean expenditure was then multiplied by the appropriate regional factor to estimate the standard deviation for each state.

The standard error of the mean expenditure for each state was then calculated by the formula:

$$\text{standard error} = \text{S.D.} / \sqrt{n},$$

where "n" is the number of respondents providing expenditure information for the state.

Dividing the standard error for each state by the mean expenditure per visitor provides an estimate of the relative sampling variability of the estimate of visitor expenditures at the 68 percent level of confidence. Multiplying this by 1.96 produces an estimate of the relative sampling variability at the 95 percent confidence level. That is, we can be certain that the actual visitor expenditures in a state lies within a band around the estimated visitor expenditures indicated by the relative sampling variability for 95 percent of the samples of this size we could possibly draw.

Table D1 provides the estimates of the relative sampling variability of the in-flight survey expenditure estimates for each state at the 95 percent confidence level.

Table D1: Foreign Visitor Survey Expenditures and
Relative Sampling Variability, 1983*
(95% confidence level)

State	Survey expenditure estimates (\$millions)	Relative sampling variability
Alabama	\$ 58.1	12.3%
Alaska	14.7	25.0%
Arizona	73.4	9.8%
Arkansas	10.1	29.4%
California	1,900.4	1.8%
Colorado	64.7	9.6%
Connecticut	40.9	11.8%
Delaware	3.4	31.7%
Florida	2,019.5	3.2%
Georgia	102.9	9.4%
Hawaii	975.7	2.9%
Idaho	3.5	30.3%
Illinois	201.0	4.9%
Indiana	33.7	15.0%
Iowa	12.4	19.5%
Kansas	8.8	22.3%
Kentucky	14.3	23.0%
Louisiana	128.9	8.4%
Maine	8.0	26.0%
Maryland	43.3	15.5%
Massachusetts	202.5	6.1%
Michigan	91.9	8.2%
Minnesota	54.8	10.8%
Mississippi	5.1	37.9%
Missouri	47.1	12.2%
Montana	3.0	39.9%
Nebraska	6.3	23.1%
Nevada	211.4	5.3%
New Hampshire	0.0	N/A
New Jersey	152.1	8.2%
New Mexico	17.1	21.4%
New York	1,333.4	2.6%
North Carolina	36.2	14.2%
North Dakota	0.6	49.8%
Ohio	82.8	7.7%

Table D1: Foreign Visitor Survey Expenditures and
Relative Sampling Variability, 1983 --
Continued (95% confidence level)

State	Survey expenditure estimates (\$ millions)	Relative sampling variability
Oklahoma	\$ 29.9	19.4%
Oregon	38.9	11.7%
Pennsylvania	110.2	7.7%
Rhode Island	11.8	20.3%
South Carolina	22.3	19.7%
South Dakota	2.5	37.7%
Tennessee	42.1	14.8%
Texas	376.1	5.1%
Utah	34.4	13.8%
Vermont	9.9	25.5%
Virginia	60.3	13.0%
Washington	108.5	6.8%
West Virginia	2.7	44.3%
Wisconsin	33.8	12.3%
Wyoming	8.8	27.3%
Dist. of Columbia	273.9	5.6%
Total	\$9,128.1	

* excludes Canadian and Mexican land visitors

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

Table D2 presents the expenditures broken down into individual expenditure categories for those states where the relative error of the total estimate is ten percent or less.

Table D2: Foreign Visitor Survey Expenditures by State Visited by Category,
1983 (\$ Millions)*

State	Public Trans.	Auto Trans.	Lodging	Food	Enter- tainment	Inci- dentals	Total
Arizona	11.4	2.8	24.8	14.1	8.7	3.2	65.0
California	258.6	53.8	638.2	327.6	244.4	385.7	1,908.3
Colorado	10.2	3.0	21.9	11.9	6.6	11.2	64.7
Florida	177.1	66.2	531.2	310.2	234.3	700.3	2,019.3
Georgia	13.5	4.5	35.3	20.1	9.8	19.7	102.9
Hawaii	112.6	4.3	359.0	131.2	159.7	209.1	975.9
Illinois	32.0	2.5	63.9	34.0	17.0	51.7	201.6
Louisiana	17.1	4.2	41.5	20.7	11.7	33.1	128.3
Massachusetts	25.0	7.1	64.7	38.2	19.0	48.7	202.7
Michigan	17.3	1.9	25.8	16.3	6.9	23.6	91.8
Nevada	39.4	5.0	67.5	36.1	28.0	35.3	211.3
New Jersey	19.9	3.3	58.7	23.5	22.4	34.1	161.9
New York	164.5	19.3	461.6	243.0	135.9	319.0	1,343.3
Ohio	12.1	1.3	25.4	14.0	8.5	21.4	82.7
Pennsylvania	15.5	2.2	35.1	18.3	11.1	28.1	110.3
Texas	39.7	10.5	94.1	54.3	32.7	143.8	375.1
Washington	15.4	2.1	33.7	18.4	10.5	28.2	108.3
District of Columbia	53.6	4.7	85.1	46.8	24.9	58.8	273.9
Total	\$1,034.9	\$198.7	\$2,667.5	\$1,378.7	\$992.1	\$2,154.2	\$8,426.1

* Does not include Canadian or Mexican land visitor spending.

Note: Figures may not add to totals due to rounding.

Source: U.S. Travel Data Center

APPENDIX E

FOREIGN VISITOR IMPACT BY TIA TRAVEL REGION

The following tables present data on foreign visitor expenditures and their impact on individual Travel Regions as defined by the Travel Industry Association of America.

These tables are analagous to those for Census regions in the text. The Census region table number is the same as the number following "Table E" in the travel region tables.

Table E3: All Foreign Visitor Expenditures By Visitor Residence, By Travel Region Visited 1983
(\$ Millions).

Visitor Residence	New England	Eastern Gateway	George Wash. Country	South	Great Lakes Country	Mountain West	Frontier West	Far West	Territories	Total
Canada	\$251.2	\$278.5	\$102.3	\$760.9	\$177.7	\$123.1	\$125.4	\$694.6	\$0.0	\$2,513.7
Mexico	7.5	44.9	13.7	41.1	6.1	2.5	1,032.2	619.4	8.4	1,775.9
Mexico-land	0.0	0.0	0.0	0.0	0.0	0.0	966.0	491.0	0.0	1,457.0
Mexico-air	7.5	44.9	13.7	41.1	6.1	2.5	66.2	128.4	8.4	318.9
United Kingdom	36.0	171.3	34.5	322.4	27.6	8.8	19.6	157.6	4.0	761.9
West Germany	23.7	125.3	51.1	128.6	53.8	12.1	41.7	203.8	1.2	641.5
France	14.0	76.7	19.2	90.3	27.1	5.3	21.5	95.9	0.4	350.4
Italy	11.0	71.2	16.4	24.3	13.6	5.6	15.2	57.5	0.2	215.1
Other Europe	40.5	153.8	39.5	206.6	62.1	15.7	49.6	255.2	2.7	825.6
Venezuela	12.6	53.6	7.0	201.8	18.2	0.4	36.7	26.0	7.7	364.0
Other S. America	19.1	210.4	52.9	521.8	40.9	6.4	68.7	150.2	4.3	1,074.7
Central America	2.4	39.8	17.8	161.1	14.7	7.3	12.4	88.2	1.5	345.1
Caribbean	8.6	118.1	58.3	437.8	11.2	0.0	11.5	31.2	9.4	686.1
Africa	6.1	41.1	23.0	40.8	20.1	4.4	8.8	44.9	0.2	189.4
Japan	24.1	138.7	46.5	75.5	100.3	11.6	35.2	1,168.9	75.6	1,676.3
Other Far East	29.3	113.9	38.8	41.8	73.6	7.3	63.8	408.5	0.6	777.6
Australia	10.2	33.2	16.6	36.5	15.7	8.5	14.9	188.5	0.2	324.4
Other Oceania	12.4	12.8	6.1	10.9	3.8	3.0	9.8	76.6	0.1	135.6
Middle East	15.6	90.8	52.3	98.0	28.0	15.0	76.8	171.7	0.9	549.1
Unallocated*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	544.8
Total	\$524.3	\$1,773.9	\$596.2	\$3,200.0	\$694.4	\$237.1	\$1,643.8	\$4,438.8	\$117.2	\$13,772.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding.

* Includes responses that exceeded length of stay criteria or could not be allocated among states; see text.

States comprising the travel regions are:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; EASTERN GATEWAY: New York, New Jersey. GEORGE WASHINGTON COUNTRY: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia. SOUTH: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee. GREAT LAKES COUNTRY: Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin. MOUNTAIN WEST: Colorado, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming. FRONTIER WEST: Arizona, Kansas, Missouri, New Mexico, Oklahoma, Texas. FAR WEST: Alaska, California, Hawaii, Idaho, Nevada, Oregon, Washington.

Table E8: All Foreign Visitor Expenditures by Travel Region Visited, by Category, 1983
(\$ Millions).

Travel Region	Public Trans.	Auto Trans.	Lodging	Food	Enter- tainment	Inci- dentals	Total
New England	\$47.0	\$47.2	\$143.9	\$126.4	\$55.2	\$104.9	\$524.4
Eastern Gateway	198.2	64.4	584.6	350.2	191.7	384.9	1,774.0
George Wash. Country	89.1	31.9	176.8	114.5	59.3	124.4	596.1
South	277.5	193.0	835.6	612.9	370.3	910.9	3,200.1
Great Lakes Country	90.7	36.2	206.0	140.4	65.8	155.5	694.5
Mountain West	24.9	23.3	66.1	57.3	26.9	38.7	237.2
Frontier West	73.0	102.7	264.6	307.0	132.9	764.5	1,643.7
Far West	469.6	205.2	1,322.1	823.8	557.0	1,061.4	4,439.0
Other*	62.9	22.3	215.6	99.1	67.2	195.1	662.5
Total	\$1,333.1	\$726.1	\$3,814.0	\$2,631.7	\$1,526.4	\$3,740.1	\$13,772.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding.

* Includes spending in U.S. Territories and unallocated spending.

States comprising the travel regions are:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont;
EASTERN GATEWAY: New York, New Jersey; GEORGE WASHINGTON COUNTRY: Delaware, District of
Columbia, Maryland, Pennsylvania, Virginia, West Virginia; SOUTH: Alabama, Arkansas,
Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee;
GREAT LAKES COUNTRY: Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin. MOUNTAIN
WEST: Colorado, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming. FRONTIER WEST:
Arizona, Kansas, Missouri, New Mexico, Oklahoma, Texas; FAR WEST: Alaska, California,
Hawaii, Idaho, Nevada, Oregon, Washington.

Table E9: Foreign Visitor Expenditures by Travel Region Visited by
Visitor Residence, 1983 (\$ Millions).

Travel Region	Canada	Mexico	Europe	Far East	Other Overseas	Total
New England	\$251.2	\$7.5	\$125.1	\$53.5	\$87.0	\$524.3
Eastern Gateway	278.5	44.9	598.3	252.5	599.7	1773.9
G.Washington Co.	102.3	13.7	160.8	85.3	234.1	596.2
South	760.9	41.1	772.2	117.3	1508.8	3200.2
Great Lakes Co.	177.7	6.1	184.3	173.9	152.5	694.4
Mountain West	123.1	2.5	47.5	16.9	45.1	237.1
Frontier West	125.4	1032.2	147.6	99.0	239.5	1643.8
Far West	694.6	619.4	770.0	1577.4	777.4	4438.8
Other*	0.0	50.5	161.5	211.2	239.3	662.3
Total	\$2,513.7	\$1,818.0	\$2,967.4	\$2,588.9	\$3,883.3	\$13,772.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding.

* Includes spending in U.S. Territories and unallocated expenditures.

States comprising the travel regions are:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; EASTERN GATEWAY: New York, New Jersey; GEORGE WASHINGTON COUNTRY: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia. SOUTH: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee. GREAT LAKES COUNTRY: Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin. MOUNTAIN WEST: Colorado, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming. FRONTIER WEST: Arizona, Kansas, Missouri, New Mexico, Oklahoma, Texas. FAR WEST: Alaska, California, Hawaii, Idaho, Nevada, Oregon, Washington.

Table E10: Foreign Visitor Survey Expenditures by Travel Region Visited
by Trip Purpose, 1983 (\$ Millions)*

Travel Region	Business/ Convention	Personal	Study	Bus./Con. &Personal	Not Reported	Total
New England	\$97.9	\$119.4	\$32.9	\$22.9	\$0.0	\$273.1
Eastern Gateway	605.5	533.5	87.0	164.1	4.4	1,495.4
George Wash. Co.	150.4	240.4	52.6	48.7	1.6	493.9
South	578.5	1,382.2	107.1	365.1	6.4	2,439.3
Great Lakes Co.	245.4	188.0	39.7	43.4	0.2	516.7
Mountain West	21.9	70.3	9.3	12.4	0.1	114.0
Frontier West	144.0	292.4	58.0	57.6	0.4	552.4
Far West	693.0	2,117.2	160.0	268.3	14.7	3,253.2
Other**	204.5	380.2	20.0	49.9	7.7	662.3
Total	\$2,742.0	\$5,423.6	\$566.6	\$1,032.5	\$35.5	\$9,801.0

Source: U.S. Travel Data Center

Note: Figures may not add to totals due to rounding

* Excludes Mexico land and Canadian expenditures.

** Includes spending in U.S. Territories and unallocated expenditures.

States comprising the travel regions are:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; EASTERN GATEWAY: New York, New Jersey; GEORGE WASHINGTON COUNTRY: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia. SOUTH: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee. GREAT LAKES COUNTRY: Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin. MOUNTAIN WEST: Colorado, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming. FRONTIER WEST: Arizona, Kansas, Missouri, New Mexico, Oklahoma, Texas. FAR WEST: Alaska, California, Hawaii, Idaho, Nevada, Oregon, Washington.

Table E11: Payroll Income Generated by Foreign Visitor Expenditures in the U.S., by Travel Region, by Industry Sector, 1983 (\$ millions)

Travel region	Transportation	Lodging	Food-service	Entertainment	General retail trade	Total
New England	\$17.8	\$40.4	\$31.3	\$16.4	\$13.3	\$119.2
Eastern Gateway	65.4	176.1	92.3	60.6	56.7	451.1
G. Washington Country	30.6	54.6	30.8	16.7	18.3	151.0
The South	97.3	230.2	149.7	119.0	128.8	725.0
Great Lakes Country	29.9	59.4	34.3	19.3	22.0	164.9
Mountain West	9.6	17.9	14.6	7.9	5.3	55.3
Frontier West	29.9	73.2	77.0	39.5	103.8	323.4
Far West	158.4	371.1	220.0	181.8	144.9	1076.2
Total	\$438.9	\$1,022.9	\$650.0	\$461.2	\$493.1	\$3,066.1

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

Table E13: Employment Generated by Foreign Visitor Expenditures in the U.S. by Travel Region, by Industry Sector, 1983 (thousands)

Travel region	Transportation	Lodging	Food-service	Entertainment	General retail trade	Total
New England	0.8	5.1	5.2	1.8	1.5	14.5
Eastern Gateway	2.4	15.0	12.7	4.5	5.6	40.2
G. Washington Country	1.3	5.8	5.0	1.6	1.9	15.7
The South	4.8	29.6	27.9	13.2	19.8	95.3
Great Lakes Country	1.1	6.5	5.3	2.0	2.1	17.1
Mountain West	0.7	4.5	5.7	2.1	2.8	15.8
Frontier West	1.1	5.6	5.1	2.1	1.7	15.7
Far West	5.7	33.5	30.1	15.8	14.1	99.2
Total	18.0	105.6	97.0	43.2	49.6	313.4

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

States comprising the Travel Regions:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. EASTERN GATEWAY: New York, New Jersey. G. WASHINGTON COUNTRY: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia. THE SOUTH: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee. GREAT LAKES COUNTRY: Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin. MOUNTAIN WEST: Colorado, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming. FRONTIER WEST: Arizona, Kansas, Missouri, New Mexico, Oklahoma, Texas. FAR WEST: Alaska, California, Idaho, Nevada, Oregon, Washington, Hawaii.

Table E14: Tax Revenue Generated by Foreign Visitor Expenditures in the U.S. by Travel Region, by Level of Government, 1983 (thousands)

Travel region	Federal	State	Local	Total
New England	\$32.7	\$27.1	\$5.7	\$65.5
Eastern Gateway	161.9	83.0	71.9	316.8
G. Washington Country	50.0	34.6	3.5	96.1
The South	221.6	176.9	41.0	439.5
Great Lakes Country	46.5	20.4	8.5	75.4
Mountain West	28.3	27.6	10.4	66.3
Frontier West	44.4	27.8	7.9	80.1
Far West	251.9	201.9	53.9	507.7
Total	\$837.3	\$599.3	\$202.8	\$1,649.4

Note: Details may not add to totals due to rounding.

Source: U.S. Travel Data Center

States comprising the Travel Regions:

NEW ENGLAND: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. EASTERN GATEWAY: New York, New Jersey. G. WASHINGTON COUNTRY: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia. THE SOUTH: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee. GREAT LAKES COUNTRY: Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin. MOUNTAIN WEST: Colorado, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming. FRONTIER WEST: Arizona, Kansas, Missouri, New Mexico, Oklahoma, Texas. FAR WEST: Alaska, California, Idaho, Nevada, Oregon, Washington, Hawaii.

APPENDIX F

FOREIGN VISITOR-GENERATED TAX REVENUE DETAILS FOR SELECTED STATES

The following table breaks down the tax revenue generated by all foreign visitor spending in the U.S. during 1983 among federal, state and local levels of government for selected states. These states were selected for such detail due to their relatively low sampling variability of their expenditure estimates. Each shows an inflight survey relatively sampling variability of less than ± 10 percent at the 95 percent confidence level. See Appendix D for more information.

Table F1: Foreign Visitor-generated Tax Revenue for Selected States, by Level of Government, 1983 (\$ millions)

State	Federal	State	Local	Total
Arizona	\$ 14.5	\$ 19.5	\$ 5.7	\$ 39.7
California	165.1	132.7	42.1	339.9
Colorado	7.1	2.8	2.5	12.4
Florida	140.3	121.6	19.2	281.1
Georgia	7.4	4.2	1.7	13.3
Hawaii	66.5	52.2	7.8	126.5
Illinois	19.1	3.4	3.3	25.8
Louisiana	8.5	4.4	3.6	16.5
Massachusetts	18.7	14.7	3.0	26.4
Michigan	12.2	6.7	2.2	21.1
Nevada	20.6	14.4	1.6	36.6
New Jersey	14.7	11.8	2.7	29.2
New York	147.2	71.2	69.2	287.6
Ohio	8.8	5.5	1.8	16.1
Pennsylvania	10.2	8.4	1.4	20.0
Texas	60.8	40.4	17.0	118.2
Washington	12.6	11.8	2.0	26.4
District of Columbia	28.7	18.7	N/A	55.4

N/A = not applicable

Source: U.S. Travel Data Center